

Title (en)
DUMP TRUCK TIP-OVER SAFETY DEVICE

Title (de)
SICHERHEITSVORRICHTUNG ZUR VERHINDERUNG DES ÜBERKIPPENS EINES KIPPLADERS

Title (fr)
DISPOSITIF DE SÉCURITÉ CONTRE LE BASCULEMENT D'UN CAMION BENNE

Publication
EP 2511131 B1 20180418 (EN)

Application
EP 10836032 A 20101209

Priority
• JP 2009280709 A 20091210
• JP 2010072133 W 20101209

Abstract (en)
[origin: WO2011071112A1] A tip-over safety device, for a dump truck comprising a bed (3) and hoist cylinders (5), comprises a loaded weight estimation unit (32) that estimates the load weight upon the bed; a chassis moment of rotation computation unit (33) that computes the moment of rotation of the chassis (Mb) that arises from the movement of the load when the load is ejected; a reference moment computation unit (34) that assigns moment of rotation that is less than or equal to the tip-over threshold moment (MI), which is the smallest moment of rotation required to lift the front wheels (1) off the ground, to the reference moment (Ms); a determination unit (35) that determines whether the moment of rotation of the chassis (Mb) exceeds the reference moment (Ms); and a display device (37) that notifies the driver that there is a strong probability of a tip-over, if it is determined that the moment of rotation of the chassis (Mb) has exceeded the reference moment (Ms). It is thus possible to avoid dump trucks tipping over as a result of dumping their loads all at once.

IPC 8 full level
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